

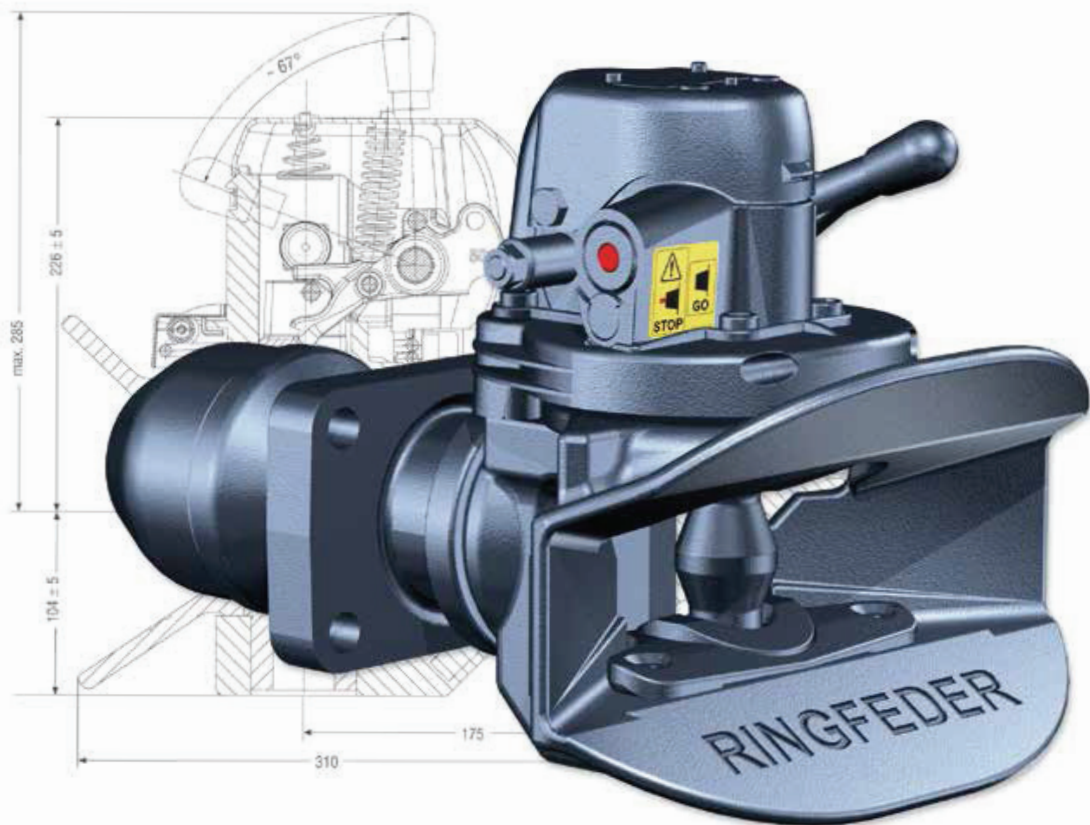


RINGFEDER

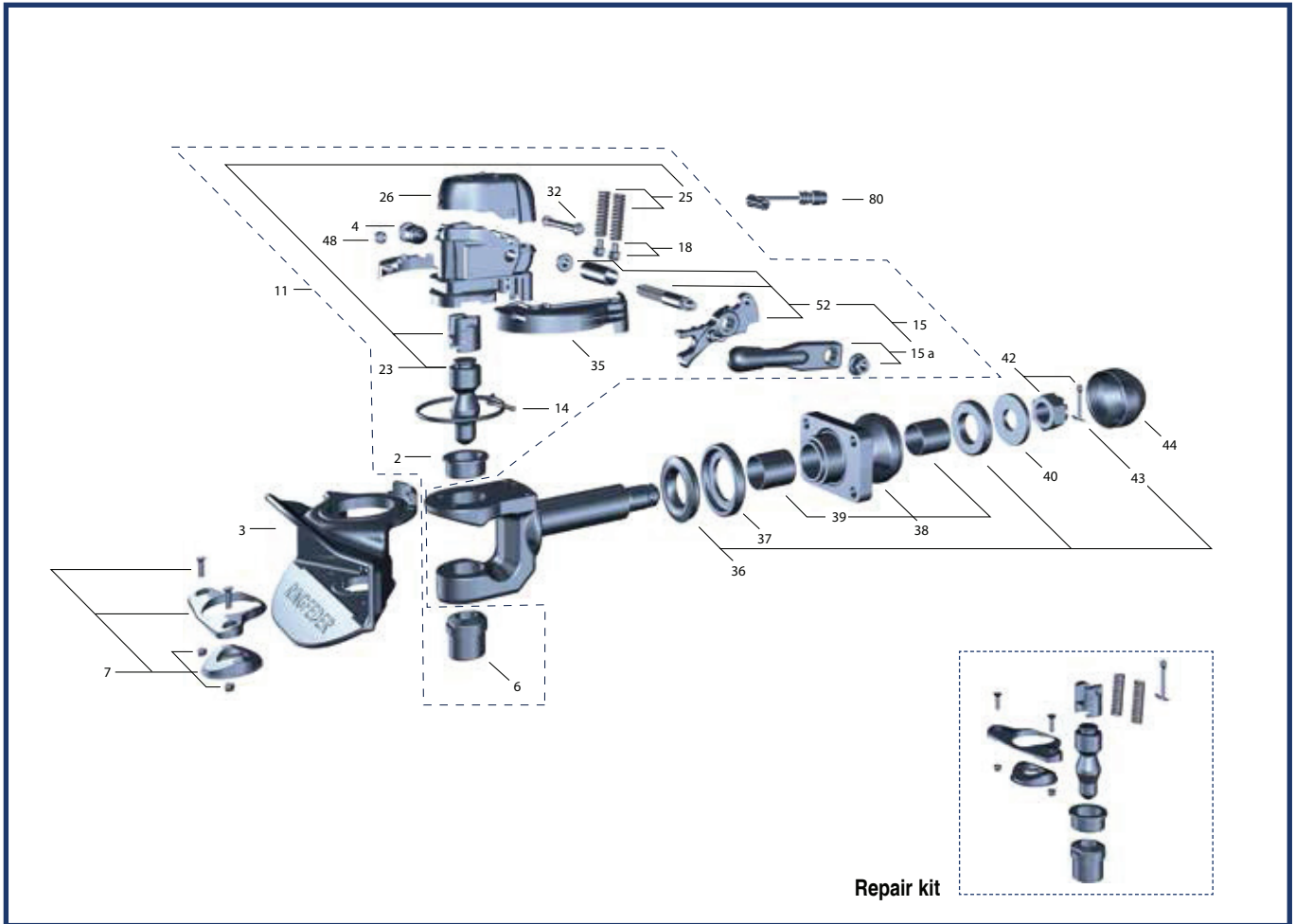
Automatic Trailer Coupling

RINGFEDER® 5055-NZ

also with distance control and remote indicator for heavy duty centre axle trailers using 50 mm drawbar eyes EC type approval according to class C 50-X in compliance with EC regulation 94/20



Type 5055 design A-NZ



Repair kit

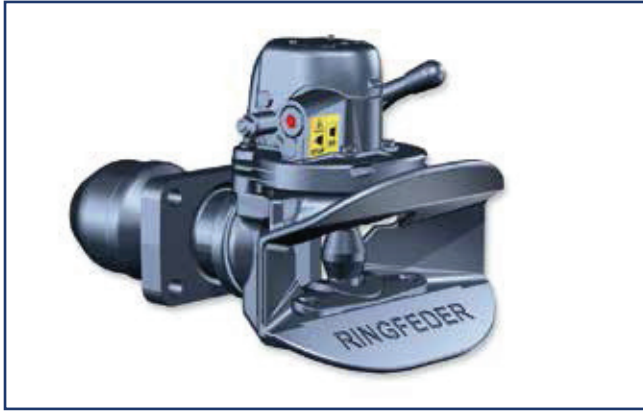
Type 5055 A - NZ

Pos.	No.	Designation
2	14 995 463	Top guide bush
3	14 991 247	Coupling body
4	14 994 478	Safety device
6	14 991 239	Bottom guide bush
7	14 991 255	Wearing plate (cast iron)
11	14 991 263	Coupling mechanism design A - without sensor
14	14 994 529	Return spring
15	14 991 391	Hand-/locking lever combination design A
15 a	14 991 312	Hand lever design A
18	7 998 341	Spring arm
23	14 991 279	Coupling bolt
25	14 991 273	Locking spring
26	14 991 367	End cap
32	14 991 359	Hexagon screw M10 x 115, 10.9

Type 5055 A - NZ

Pos.	No.	Designation
35	14 991 287	Plastic covers for mechanism
36	14 994 568	Rubber spring
37	14 994 472	Thrust washer
38	14 994 463	Bar guide
39	14 994 876	Bearing bush
40	14 994 496	Tension washer
42	6 997 732	Castellated nut M45 x 3
43	12 991 533	Cotter pin 8 X 80
44	14 994 455	Protecting cap
48	9 122 900	Plug for sensor hole (10 pieces)
52	14 991 383	Axle with locking lever
80	14 991 406	Sensor
	14 991 341	Conversion kit for model AP
	14 991 237	Repair kit (Pos. 2 + 6 + 7 + 23 + 43)

Design	Class	EEC type approval 94/20 EG	D-Value kN	Dc-Value kN	V-Value kN	Admiss. supporting load kg	Weight kg	Order number
A - NZ	C 50-X	e11 00-5997	200	135	75/63	1000/2000	50	14 991 616



Type 5055 without distance control, Model A - NZ

The trailer coupling is closed and secured, resp. coupled, that is to say the towing eye is inserted, the coupling bolt in its lower position, the safety device is engaged, the indicator pin in this secured position of the safety device is fitting flush to the safety cap in the coupling mechanism.

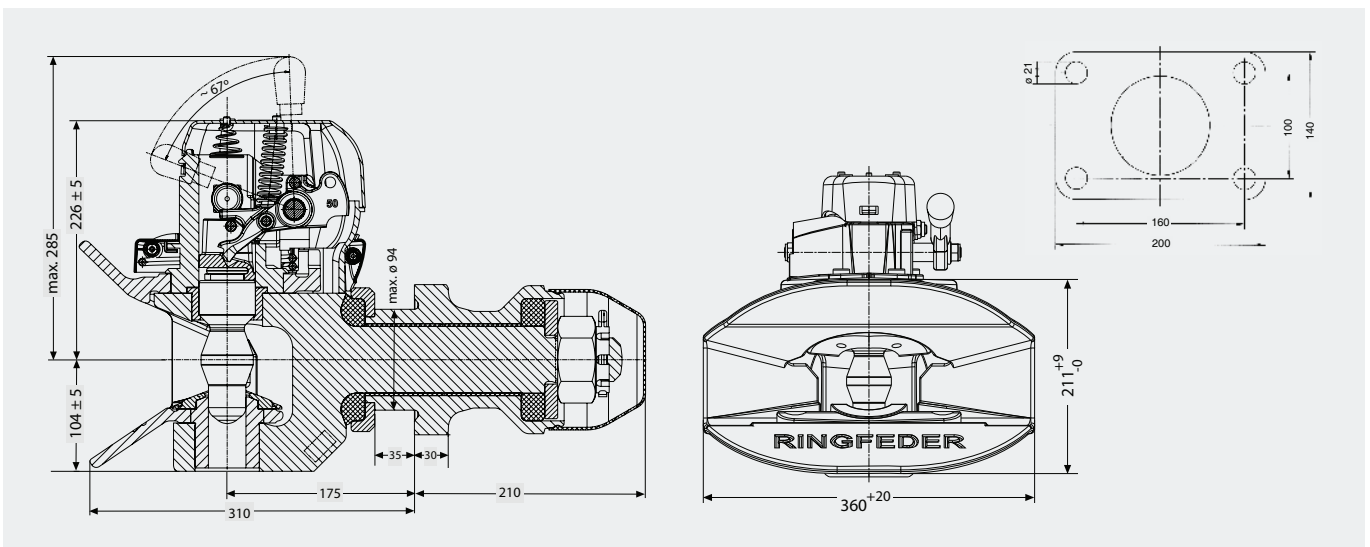
Releasing and opening of the trailer coupling:

To open the coupling the handle is moved to its upper end position and then released. This will cause the coupling bolt to lift up and the towing eye may be extended. Due to the extension of the towing eye the coupling mechanism is again released and thus, the coupling repeatedly closed and secured.

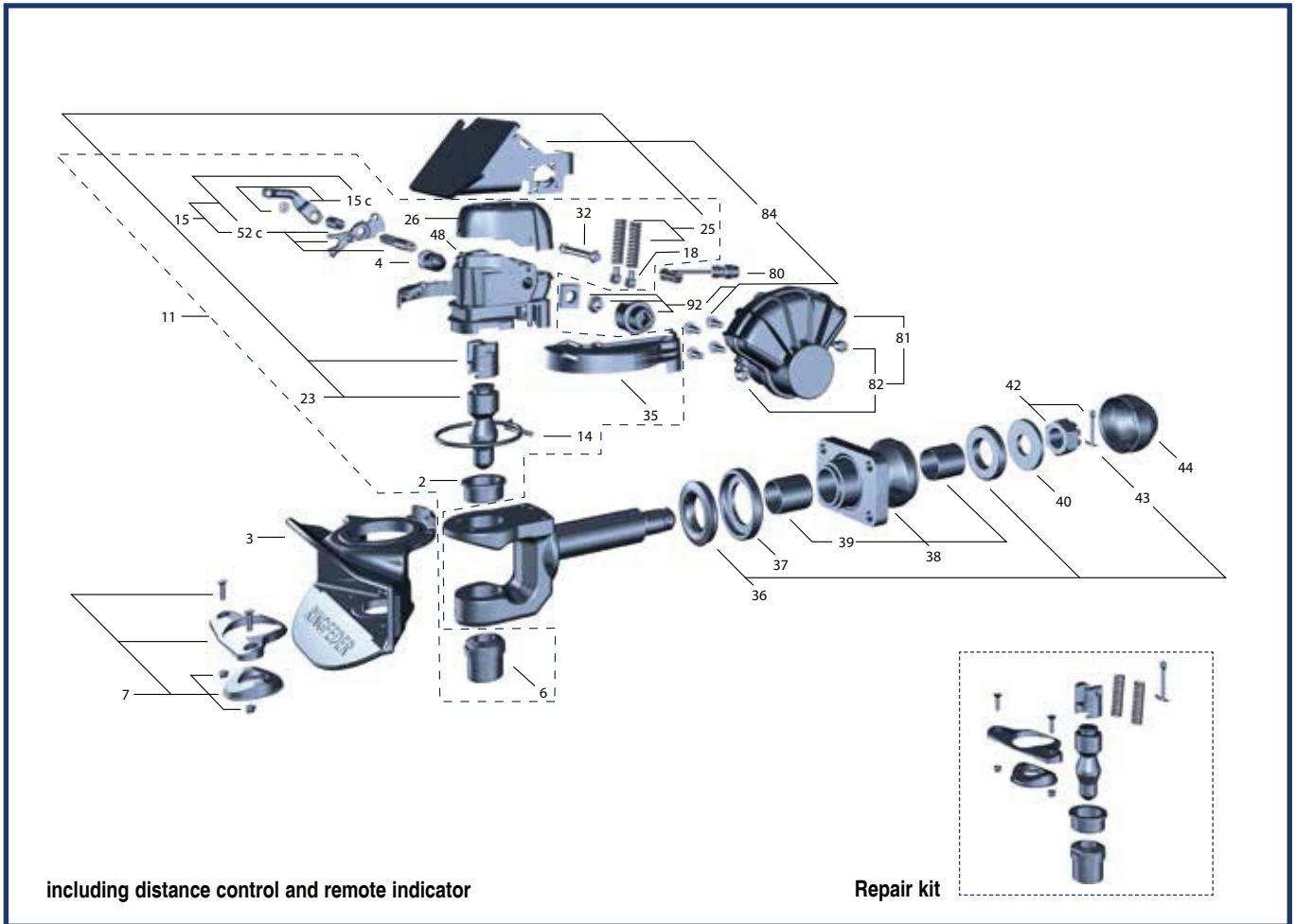
Opening of the trailer coupling and engaging the towing eye:

To open the trailer coupling proceed as described above. The coupling lever is in its upper end position, the coupling is set ready for its next engagement. When inserting the towing eye, the coupling mechanism is released by lifting the coupling bolt. The coupling closes automatically, which means that the coupling bolt is inserted through the towing eye bush in its lower position in the bottom guide bush.

Check that after each coupling process the safety device is fully engaged. If the indicator pin is not fitting closely to the safety cap the trailer coupling is unsecured and the whole procedure must be repeated.



Type 5055 design AP-NZ



including distance control and remote indicator

Repair kit

Spare parts

Type 5055 AP - NZ		
Pos.	No.	Designation
2	14 995 463	Top guide bush
3	14 991 247	Coupling body
4	14 994 478	Safety device
6	14 991 239	Bottom guide bush
7	14 991 255	Wearing plate (cast iron)
11	14 991 315	Coupling mechanism hand lever left cpl. without sensor
14	14 994 529	Return spring
15	14 991 253	Hand-/locking lever combination design AW, AP
15 c	14 991 236	Hand lever design AW, AP, left
18	7 998 341	Spring arm
23	14 991 279	Coupling bolt
25	14 991 273	Locking spring
26	14 991 367	End cap
32	14 991 359	Hexagon screw M10 x 115, 10.9
35	14 991 287	Plastic covers for mechanism

Type 5055 AP - NZ		
Pos.	No.	Designation
36	14 994 568	Rubber spring
37	14 994 472	Thrust washer
38	14 994 463	Bar guide
39	14 994 876	Bearing bush
40	14 994 496	Tension washer
42	6 997 732	Castellated nut M45 x 3
43	12 991 533	Cotter pin 8 X 80
44	14 994 455	Protecting cap
48	9 122 900	Plug for sensor hole (10 pieces)
52 c	14 991 261	Axle with locking lever
53	14 996 031	Valve box cpl.
53 a	14 996 047	Valve box without velves
80	14 991 406	Sensor
81	14 994 516	Power Actuator
82	14 994 474	Air nipples for Power Actuator
84	14 991 292	Bracket kit
92	14 991 316	Adapter kit
	14 991 237	Repair kit (Pos. 2 + 6 + 7 + 23 + 43)

Technical data

Design	Class	EEC type approval 94/20 EG	D-Value kN	Dc-Value kN	V-Value kN	Admiss. supporting load kg	Weight kg	Order number
AP - NZ	C 50-X	e11 00-5997	200	135	75/63	1000/2000	60	14 991 183



Opening of the trailer coupling and coupling:

Unlock and open the valve box door. Turn the red handle clockwise to "ON" and fold out the yellow handle. Simultaneously press on the yellow handle where it says "Press" and turn the yellow handle anti-clockwise to "OPEN". The mechanism is hereby admitted with compressed air and the coupling bolt lifted up via shaft and locking lever. Then turn the yellow handle back to "CLOSE" and fold them in. Couple to the trailer. The coupling will close when the towing eye pushes up the coupling bolt and this releases the mechanism. Check, that the green light in the cabin for the coupling lights up. Check, that the indicator pin is completely in. (Indicator pin flush with the safety cap). If the indicator pin is not completely in and the green light in the cabin for the coupling does not light up, the coupling procedure must be repeated. Only when the indicator pin is completely in and the green light in the cabin for the coupling lights up the coupling is closed and secured correctly. When the trailer is coupled correctly turn back the red handle anti-clockwise into "OFF" then close and lock up the valve box door. (The valve box door can only be closed when both handles are in the closed position.) Now the trailer is secured and driving may begin. In case of failure of the compressed air supply the coupling can be opened by the hand-lever.

Operation:

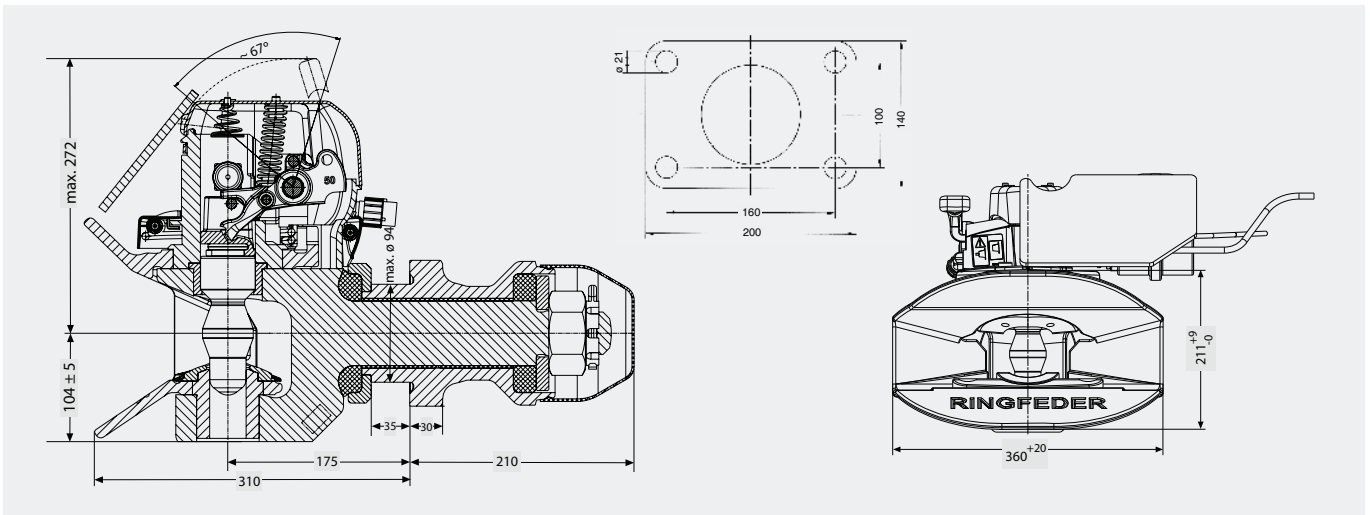
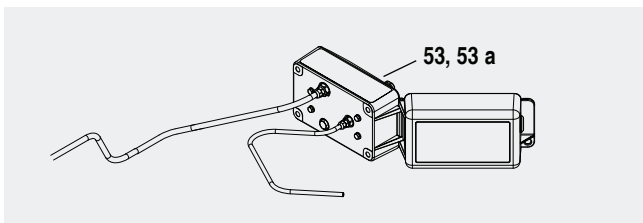
Type 5055 Model AP - NZ including distance control via power actuator and remote indicator

The trailer coupling is closed and secured, resp. coupled that is to say the towing eye is inserted, the coupling bolt in its lower position, the safety device is engaged, the indicator pin in this secured position of the safety device is fitting flush to the safety cap, the green indicator lamp for the trailer coupling in the cab lights up.

Opening of the trailer coupling and uncoupling:

Unlock and open the valve box door. Turn the red handle clockwise to "ON" and fold out the yellow handle. Simultaneously press on the yellow handle where it says "Press" and turn the yellow handle anti-clockwise to "OPEN". The mechanism is hereby admitted with compressed air and the coupling bolt lifted up via shaft and locking lever. (In case the coupling bolt gets jammed with the towing eye, the driver can attend to releasing the coupling bolt by slightly jerking on the towing vehicle and thus, causing the trailer coupling to open.) Then turn the yellow handle back to "CLOSE" and fold them in. Uncouple the trailer. The coupling closes, when the trailer is disconnected. Turn the red handle anti-clockwise to "OFF". Close and lock up the valve box door.

(The valve box door can only be closed when both handles are in the closed position.)



Type 5055
Design A - NZ



Type 5055
Design AP - NZ



- Modular system
- Servo assisted distance control
- Rotating coupling bolt
- Low weight
- Minimized wear
- Compatible and safe handling
- Easy to service

Technical Data

D-value for towing vehicle and full-trailer:

$$D \text{ (kN)} = g \cdot \frac{T \cdot R}{T + R}$$

The calculated D-Value may be **less or equal to** the D-value of the coupling

T: max. mass in tonnes of the towing vehicle
R: max. mass in tonnes of the semi-trailer
g: acceleration due to gravity 9.81 m/s²

Important Instruction: When fitting (or replacing) the trailer coupling the relevant legal regulations and the instructions from the car manufacturers have to be observed.

Dc-value for towing vehicle and centre axle trailer:

(only applicable in connection with the V-value)

$$D_c \text{ (kN)} = g \cdot \frac{T \cdot C}{T + C}$$

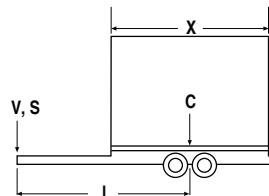
The calculated Dc-value may be **less or equal to** the Dc-value of the coupling.

T: max. mass in tonnes of the towing vehicle
C: sum of the axle loads of the centre axle trailer carrying maximum permissible load, in tonnes
g: acceleration due to gravity 9.81 m/s²

V-value for the centre axle trailer

(only applicable in connection with the Dc-value)

$$V \text{ (kN)} = a \cdot \frac{X^2}{l^2} \cdot C$$



The calculated V-value may be **less or equal to** the V-value of the coupling.

a: equivalent vertical acceleration in the coupling point in m/s²

a = 1.8 for vehicles with air suspension
a = 2,4 for vehicles with other suspension

l: theoretical drawbar length in metres
X: length of the loading area of the trailer in metres

X^2/l^2 at least 1.0 (for the calculation)

C: sum of the axle loads of the centre axle trailer carrying maximum permissible load, in tonnes

EEC Type Approval: The mounting of the trailer coupling has to be checked in accordance with the regulations contained in appendix I, no. 5.10 and in compliance with the requirements laid down in appendix VII of the EC regulation 94/20.



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